

What is claimed is:

1. A method of fabricating a metal interconnection of semiconductor device comprising the steps of:
5 forming a metal interconnection by depositing and patterning a metal layer on the surface of a substrate having some predetermined structures;
forming a passivation layer over the substrate including the metal interconnection;
10 performing a thermal treatment process for the substrate with the passivation layer;
forming a bond pad by selectively etching the passivation layer so that some portion of the metal interconnection is exposed;
15 performing a probe test through the bond pad after grinding back side of the substrate with the bond pad; and
bonding a wire to the bond pad to connect the bond pad with an external circuit.
- 20 2. The method as defined as claim 1, wherein the step of forming a passivation layer comprises the steps of depositing an oxide on the surface of the substrate and depositing a nitride on the oxide.
- 25 3. The method as defined by claim 1 or claim 2, wherein the metal layer comprises a bottom barrier metal, an aluminum alloy, and an upper barrier metal, the bottom barrier metal being selected from the group of Ti, TiN, and Ti/TiN, the upper barrier metal being selected from the group of Ti and TiN.
- 30 4. The method as defined by claim 1 or claim 2, wherein the thermal treatment process is a sintering process, a baking process, or a combination of the sintering process and the baking process.

5. The method as defined by claim 4, wherein the sintering process is performed at a temperature of 350~450°C for 10~50 minutes.

6. The method as defined by claim 4, wherein the baking process is performed at a temperature of 150~250°C for 48~80 hours.

7. The method as defined by claim 1 or claim 2, wherein the grinding and the probe test are performed through an in-situ process immediately after the formation of the bond pad.